

CIRCULATE TO:
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 MECHANICS
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- A. MerCruiser MCM 120R-thru-260R Stern Drive Identification
- B. MerCruiser MCM 120R-thru-260R Engines and Transom Assemblies Incompatible with Old Models
- C. Standard Gear Ratios for MerCruiser MCM 120R-thru-260R Models
- D. Use of Older Model Stern Drive Units on MerCruiser 120R-thru-260R Models
- E. Use of MerCruiser MCM 120R-thru-260R Stern Drive Components on Older Models
- F. New Stern Drive Unit to Bell Housing Gasket (27-94996)
- G. New Model Decals for MerCruiser MCM 120R-thru-260R Stern Drive Units

A. MERCUISER MCM 120R-thru-260R STERN DRIVE IDENTIFICATION

IMPORTANT: MCM 120R-thru-260R engines and transom assembly will not interchange with previous models. Refer to Subject "B", following.

It seems that some confusion exists on how to identify the new MerCruiser I Stern Drive models from previous models. The following information should help to clarify this problem.

The new models from now on will be referred to as the MerCruiser MCM 120R, 140R, 470R, 488R, 185R, 898R, 228R and 260R. When referring to the model line as a whole, the name MerCruiser MCM 120R-thru-260R will be used. The same name also will be used when referring to the transom assembly or stern drive unit individually.

The MerCruiser MCM 120R-thru-260R models fall under the "MerCruiser I" family of stern drives and will join the models shown in the chart following.

MERCUISER I STERN DRIVES
MerCruiser I
MerCruiser IA, IB, IC
MerCruiser IA, IB, IC E-Z Shift
MerCruiser 120, 140, 160
MerCruiser 120, 140, 165
MerCruiser 888
MerCruiser 225-S, 233
MerCruiser 470
MerCruiser 898, 228, 250
MerCruiser 120-thru-260
MerCruiser MCM 120R-thru-260R

Use the following information to distinguish the new models from previous models.

SERIAL NUMBERS

NOTE: Refer to Figure 1 thru 5 for serial number locations. Serial numbers also can be found on valve rocker arm cover.

Transom Assembly Serial Number —
6216687 and Above

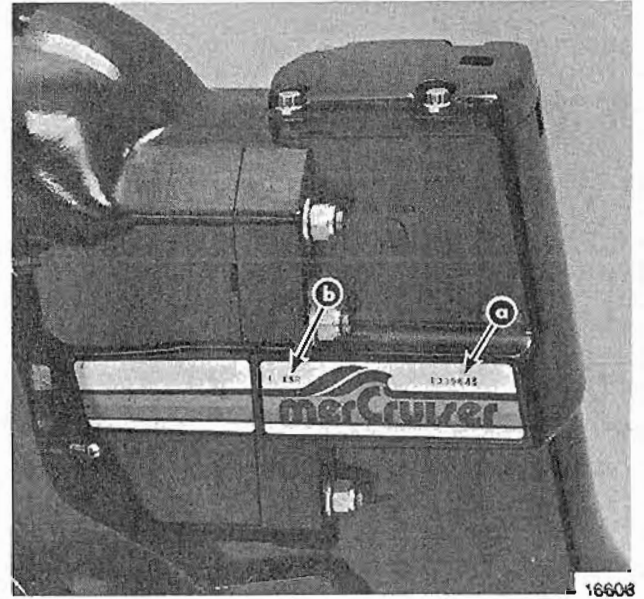
Stern Drive Unit Serial Number —
1.98:1 Gear Ratio - 6237861 and Above
1.84:1 Gear Ratio - 6225577 and Above
1.65:1 Gear Ratio - 6268065 and Above
1.50:1 Gear Ratio - 6229158 and Above
1.32:1 Gear Ratio - 6231571 and Above

Engine Serial Number —
120R - 6255466 and Above
140R - 6256955 and Above
470R - 6257008 and Above
488R - 6299270 and Above
185R - 6330183 and Above
898R - 6260100 and Above
228R - 6259640 and Above
260R - 6250990 and Above



a - Serial Number

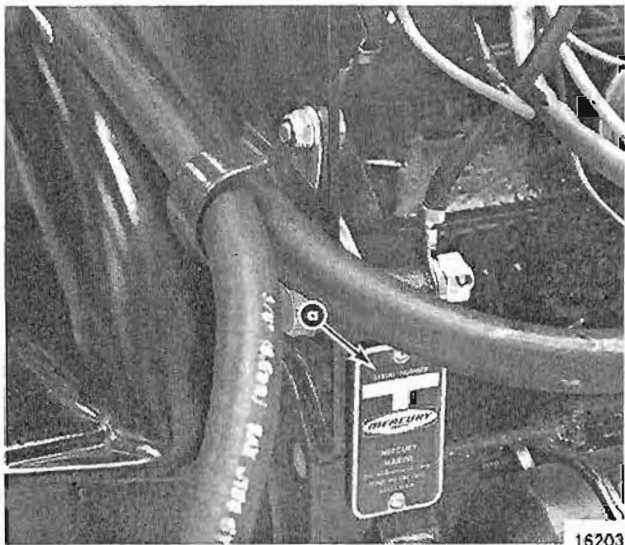
Figure 1. Transom Assembly Serial Number Location



a - Serial Number

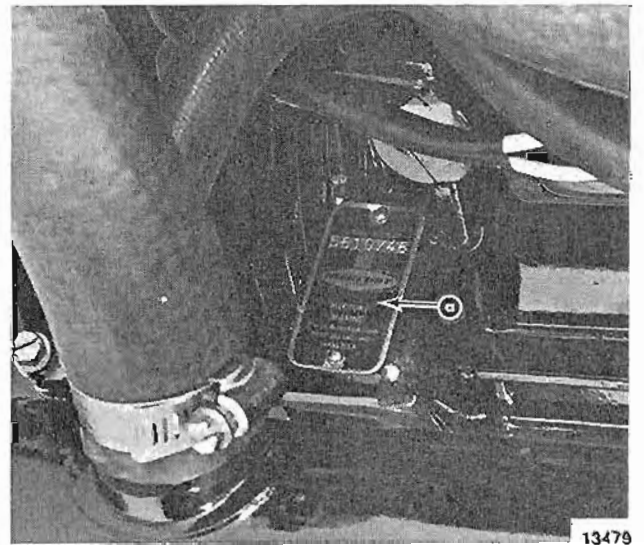
b - Gear Ratio

Figure 2. Stern Drive Unit Serial Number and Gear Ratio Location



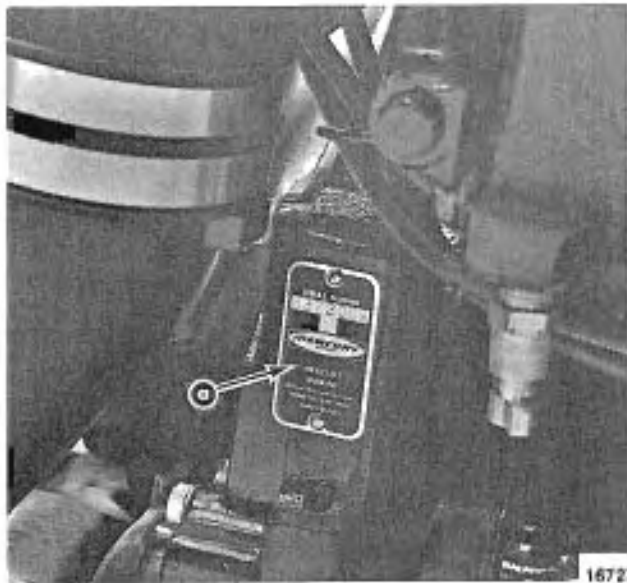
a - Serial Number

Figure 3. MCM 120R/140R Engine Serial Number Location



a - Serial Number

Figure 4. MCM 470R/488R Engine Serial Number Location

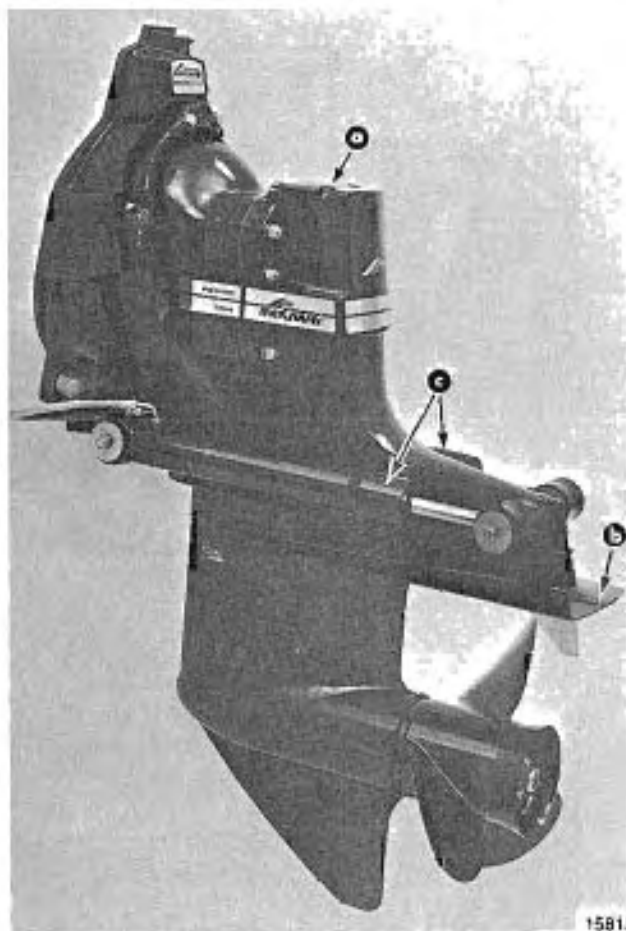


a - Serial Number

Figure 5. MCM 185R/898R/228R/260R Engine Serial Number Location

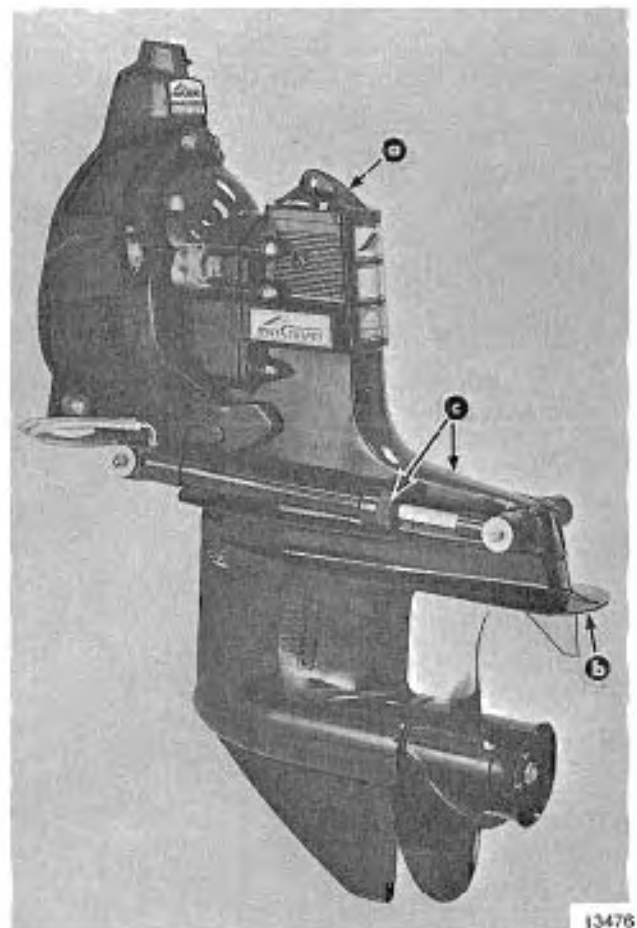
DISTINGUISHING FEATURES

NOTE: Figures 6-thru-13 show some of the more obvious differences between the old and new models.



NEW MODELS

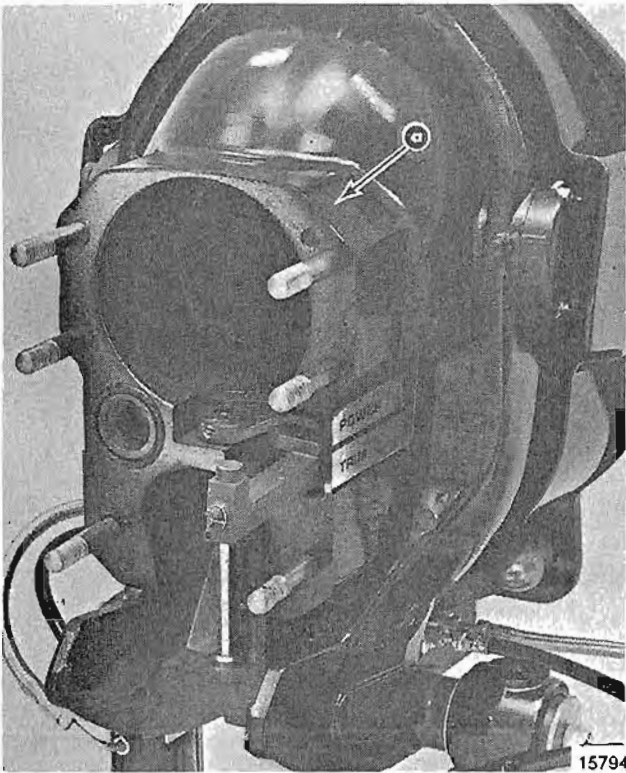
- a - Flat Top Cover
- b - Squared-Off Anti-Ventilation Plate
- c - 1-1/2" (38mm) ID Trim Cylinders



OLD MODELS

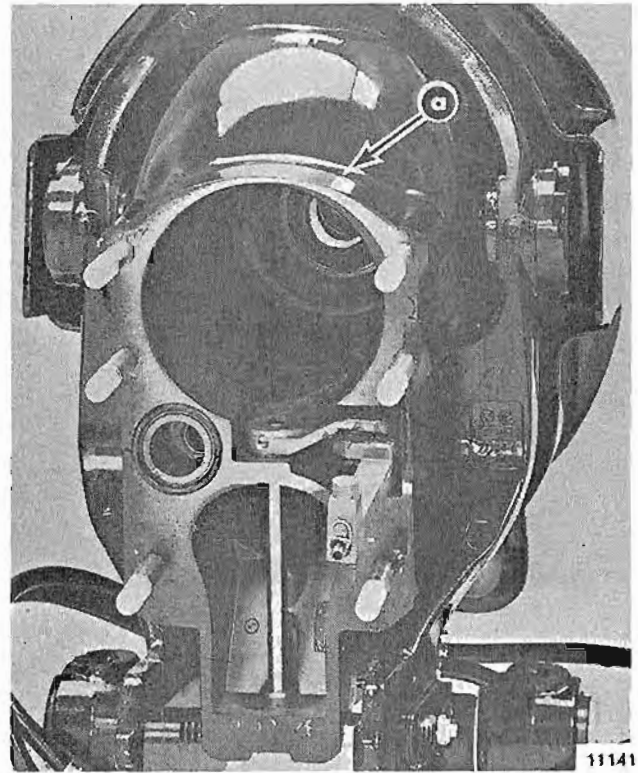
- a - Round Top Cover
- b - Rounded Anti-Ventilation Plate
- c - 1" (25mm) ID Trim Cylinders

Figure 6. Transom Assembly and Stern Drive Unit



NEW MODELS

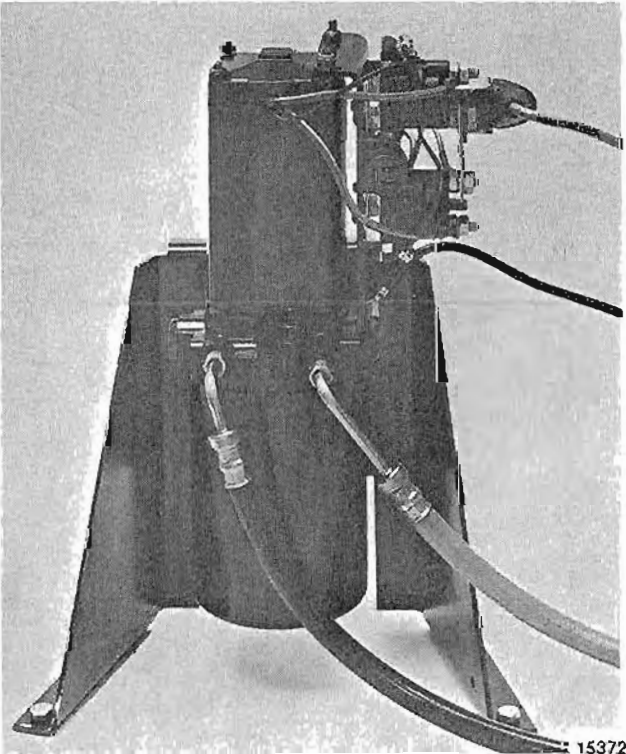
a - Squared-Off Configuration



OLD MODELS

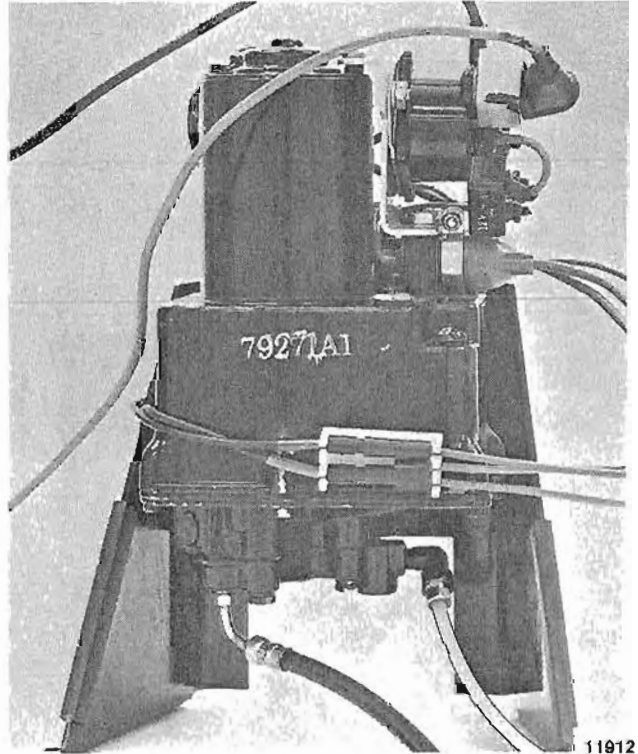
a - Rounded Configuration

Figure 7. Bell Housing



NEW MODELS

a - Oildyne Pump



OLD MODELS

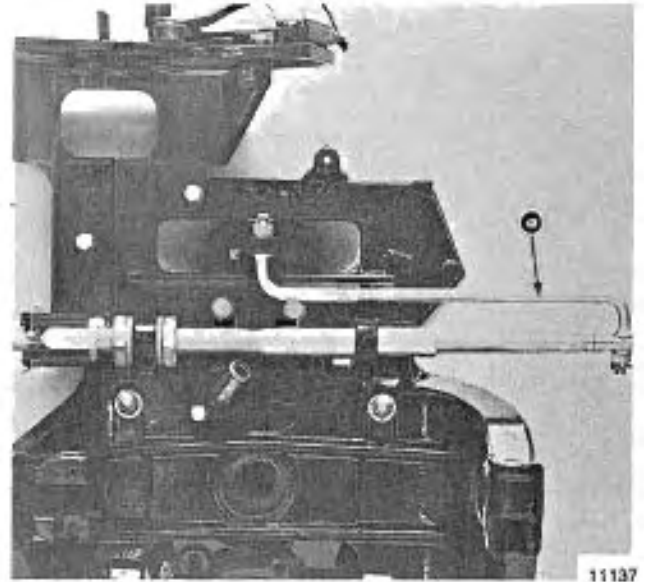
a - Prestolite Pump

Figure 8. Power Trim Pump



NEW MODELS

a - Steering Cable Attaches Directly to Steering Lever



OLD MODELS

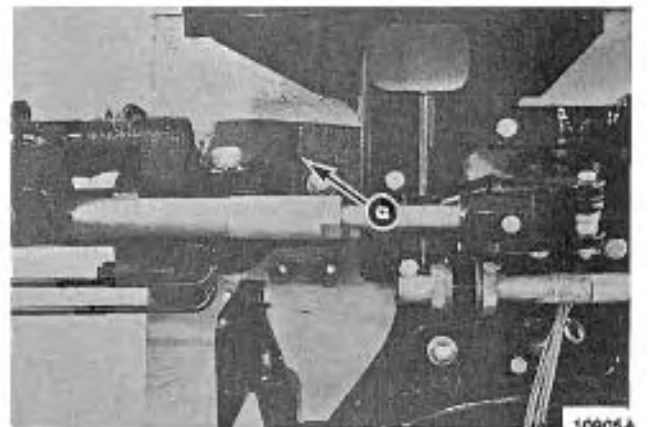
a - Link Rod Used to Connect Steering Cable to Lever

Figure 9. Manual Steering System



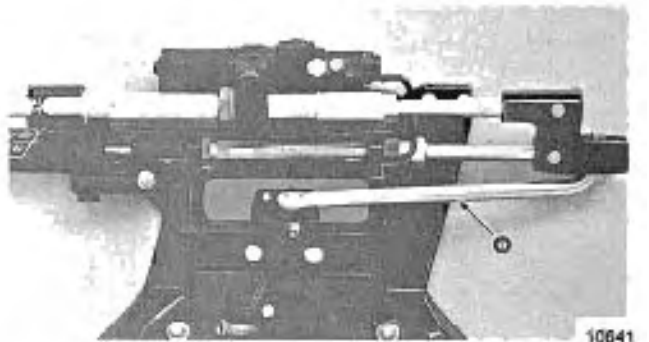
NEW MODELS

a - Power Steering Unit Mounting Bracket Part of Inner Transom Plate
 b - Power Unit Connected Directly to Steering Lever



OLD IN-LINE MODELS

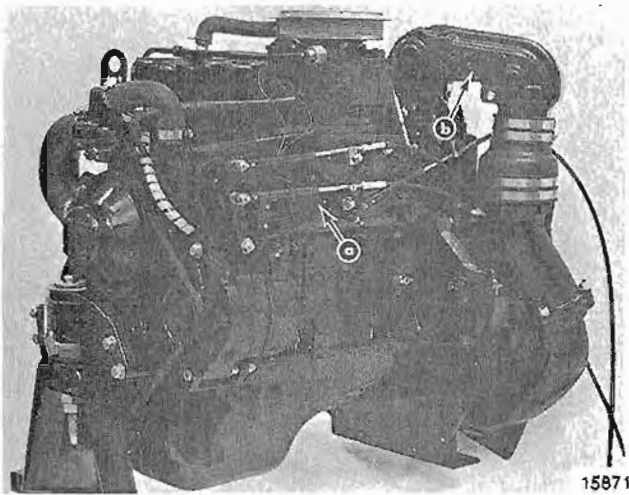
a - Separate Power Steering Unit Mounting Bracket



OLD V-8 MODELS

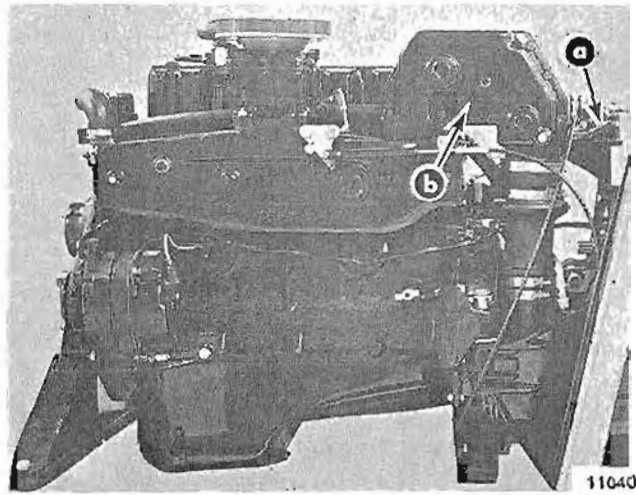
a - Link Rod Used to Connect Power Steering Unit to Steering Lever

Figure 10. Power Steering System



NEW MODEL

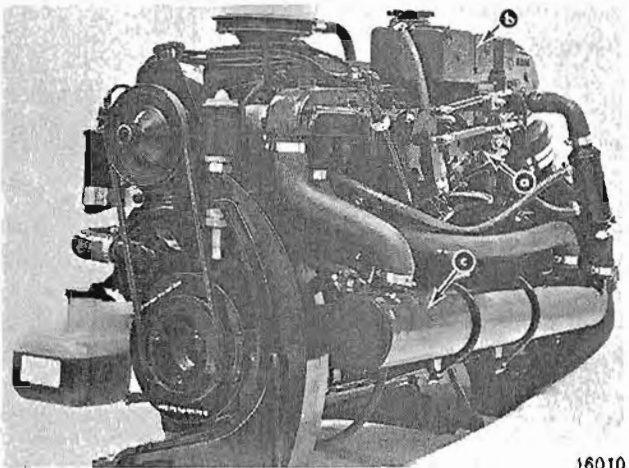
- a - Shift Plate On Side of Exhaust Manifold
- b - Off-Set Exhaust Elbow



OLD MODEL

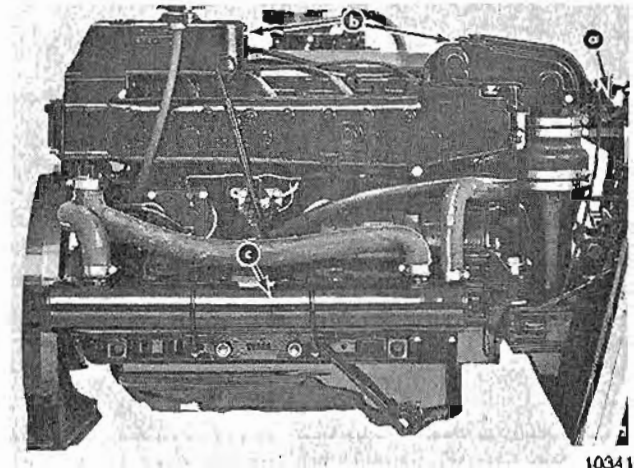
- a - Shift Plate On Inner Transom Plate
- b - Straight-Back Exhaust Elbow

Figure 11. MCM 120R/140R Engine



NEW MODEL

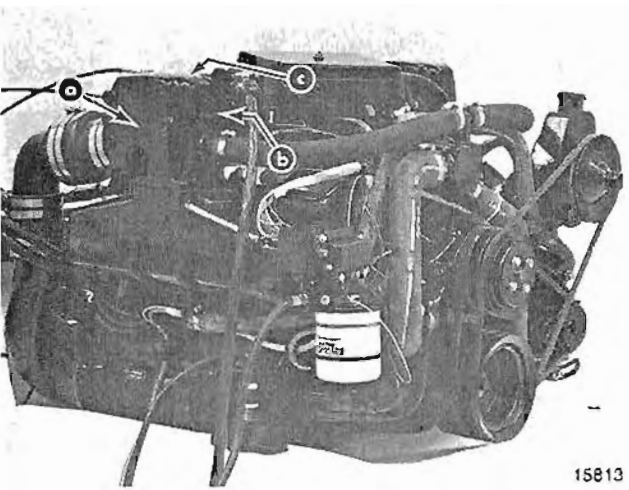
- a - Shift Plate On Side of Exhaust Manifold
- b - Combined Coolant Reservoir and Exhaust Elbow
- c - 4" (102mm) Heat Exchanger



OLD MODEL

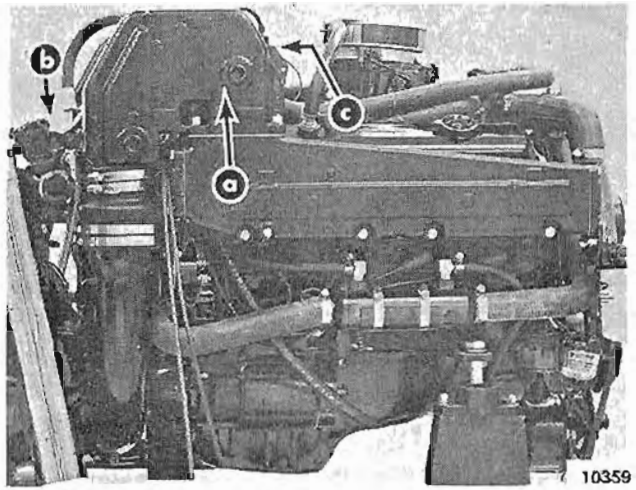
- a - Shift Plate Mounted On Inner Transom Plate
- b - Separate Coolant Reservoir and Exhaust Elbow
- c - 3" (76mm) Heat Exchanger

Figure 12. MCM 470R Engine



NEW MODEL

- a - Exhaust Elbow Mounted In Center of Manifold
- b - Shift Plate On Side of Exhaust Elbow
- c - High Energy Ignition System



OLD MODEL

- a - Exhaust Elbow Mounted On Aft End of Manifold
- b - Shift Plate At Back of Engine
- c - Standard Ignition System

Figure 13. MCM 898R/228R/260R Engine

B. MERCUISER MCM 120R-thru-260R ENGINES and TRANSOM ASSEMBLIES INCOMPATIBLE WITH OLD MODELS

The MCM 120R-thru-260R engines and transom assemblies cannot be used to replace previous (older) MCM 120-thru-260 engines and transom assemblies for the following reasons:

- Engine mounting hole center-to-center dimension is different in flywheel housing and inner transom plate.
MCM 120R-thru-260R - 9-1/2" (24.1cm)
MCM 120-thru-485 - 14-1/2" (36.8cm)
MCM 898-thru-260 - 12-1/2" (31.8cm)
- Exhaust collector systems are not interchangeable between the "R" models and the previous models.

C. STANDARD GEAR RATIOS FOR MERCUISER MCM 120R-thru-260R MODELS

CAUTION: Use of improper gear ratio stern drive unit could cause poor performance and/or damage to drive unit.

The standard stern drive unit gear ratios for the new MerCruiser MCM 120R-thru-260R models are shown in chart following. As you will observe, more than one gear ratio is specified for some models. This is to allow the power package installer the option of selecting the gear ratio which is best suited for his particular application.

Standard Stern Drive Unit Gear Ratios	
120R/140R	1.98:1
470R/488R/185R	1.84:1 or *1.65:1
898R	1.65:1 or 1.50:1
228R	1.50:1
260R	1.50:1 or *1.32:1

**MCM 470R/488R/185R/260R models using this gear ratio MUST BE equipped with Black Max propellers.*

D. USE OF OLDER MODEL STERN DRIVE UNITS ON MERCUISER 120R-thru-260R MODELS

Mercury Marine does not recommend the use of older model stern drive units on the new models, as the units will not mate up satisfactorily with the transom assembly. In addition, the older in-line model stern drive units are equipped with universal joint coupling end yoke (39385A1). (Figure 14) This yoke is shorter than yoke (59830A1) (Figure 15) used on the new model stern drive units, and therefore, will not fully engage the engine coupler splines. USE OF AN OLDER IN-LINE MODEL STERN DRIVE UNIT ON A NEW MODEL WILL RESULT IN A SPLINE FAILURE TO COUPLING AND/OR YOKE.

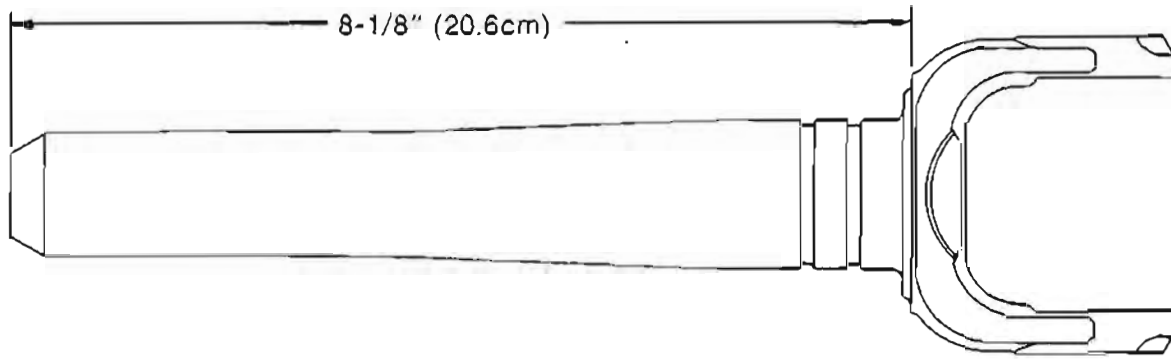


Figure 14. Universal Joint Coupling End Yoke (39385A1) Used On Older In-Line Models

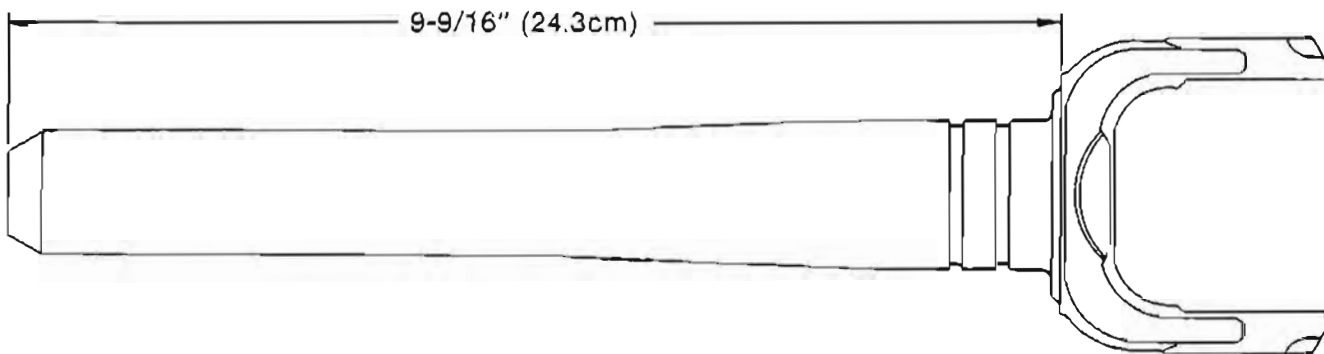


Figure 15. Universal Joint Coupling End Yoke (59830A1) Used On MerCruiser MCM 120R-thru-260R Models and Older V-8 Models

E. USE OF MERCUISER MCM 120R-thru-260R STERN DRIVE COMPONENTS ON OLDER MODELS

The following MerCruiser MCM 120R-thru-260R Stern Drive components will be used as replacement parts for older 120-thru-260 models:

- Stern Drive Units (All Ratios)
- Gear Housing Assembly
- Drive Shaft Housing Assemblies (All Ratios)
- Gear Housing
- Drive Shaft Housing
- Bell Housing (Transom Assembly)
- Gimbal Ring

These components will supersede the older components, as inventories are depleted. The old part number should still be used when ordering these parts.

The MerCruiser MCM 120R-thru-260R stern drive units and drive shaft housing assemblies, that are used as replacements for older in-line models, will be equipped with universal joint coupling end yoke (39385A1) (Figure 14). This is the only difference between the replacement units and the current production units.

The current production MerCruiser 120R-thru-260R stern drive units will be used as replacements for older V-8 models. These units are shipped with an anchor pin and attaching hardware for connecting the new, larger size trim cylinders on the new models. Discard these parts when using the drive units on older models.

F. NEW STERN DRIVE UNIT TO BELL HOUSING GASKET (27-94996)

A new gasket (27-94996) is required when installing a MerCruiser MCM 120R-thru-260R stern drive unit to bell housing on the new models. (Figure 16) If installing one of the new drive units on an older model (with old style bell housing), the old gasket (27-64818) should still be used.

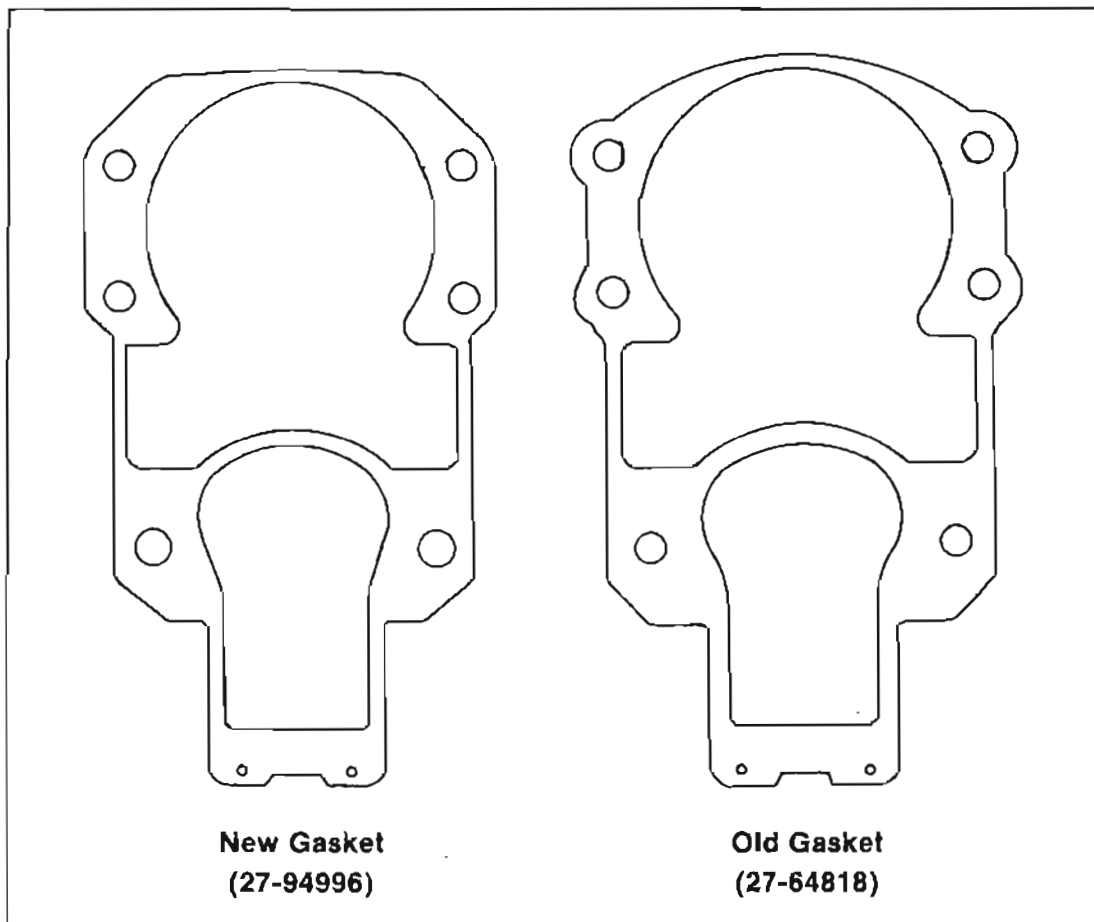


Figure 16. Stern Drive Unit to Bell Housing Gaskets

G. NEW MODEL DECALS FOR MERCUISER MCM 120R-thru-260R STERN DRIVE UNITS

Decals, which indicate the liter displacement and cylinder configuration of the engine, rather than the actual model number, are now being used on the new MerCruiser MCM 120R-thru-260R stern drive units. (Figures 17 and 18) These decals are not installed at the factory, as the same gear ratio stern drive unit may be used on more than one model. The appropriate decal for each model is shipped in the owner's manual and warranty package (shipped with the engine) and must be installed when installing the stern drive unit.

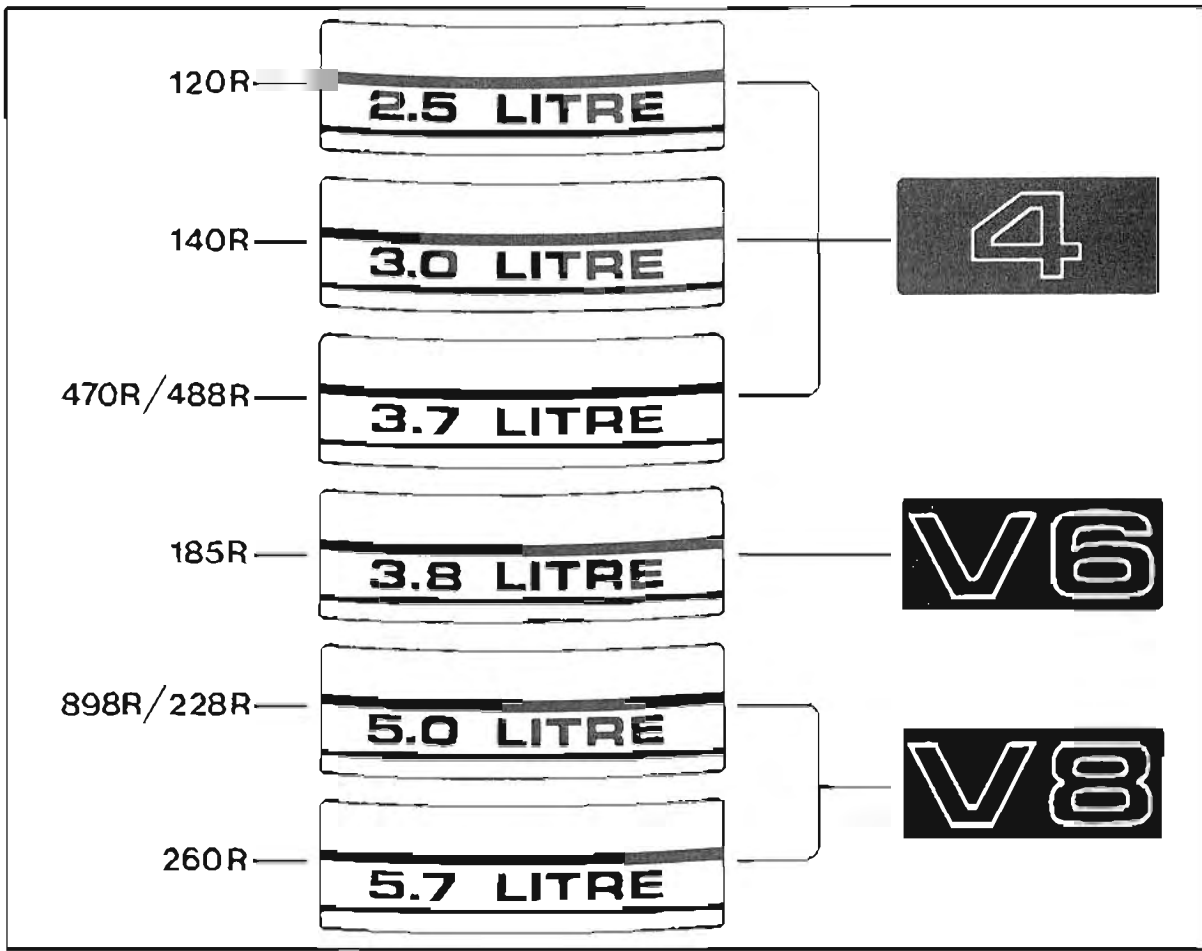


Figure 17. Liter Displacement Decals

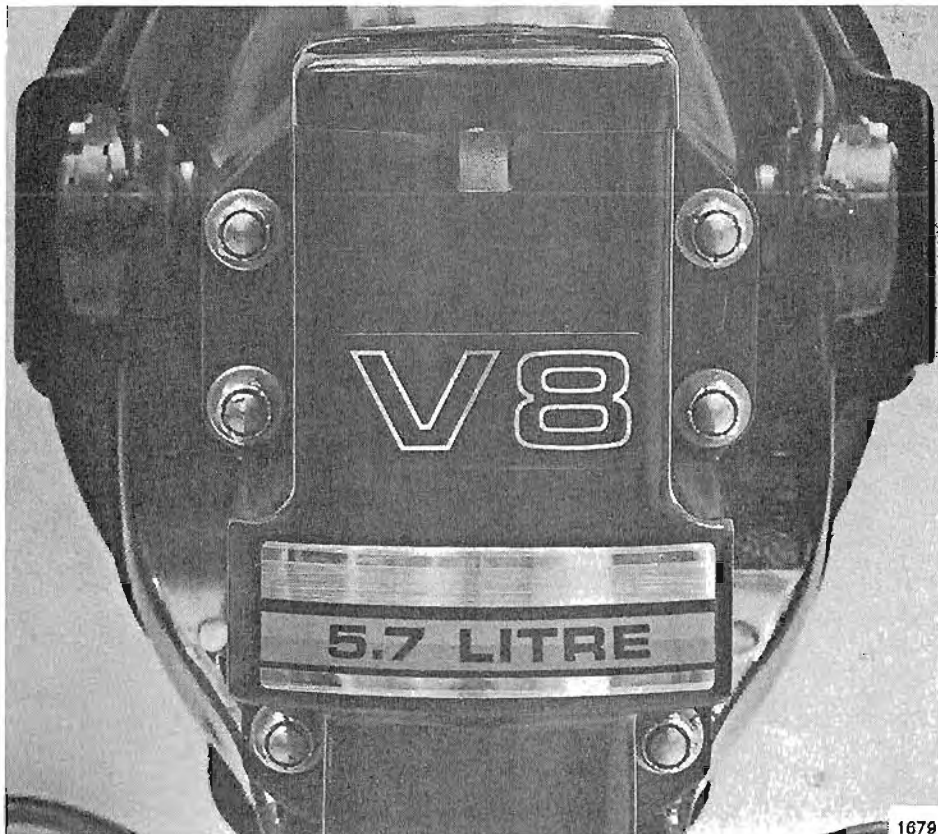


Figure 18. Cylinder Number and Displacement Decal Installed